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April 23, 2019

Via Electronic Filing
Joycelyn Boyd, Chief Clerk
SC Public Service Commission
Post Office Drawer 11649
Columbia SC 29211

RE: In Re: Application of Duke Energy Carolinas, LLC for Approval of Proposed Electric Transportation Pilot et al.
Docket Nos. 2018-321-E & 2018-322-E (not consolidated)
NMRS File No.: 058046.09000

Dear Ms. Boyd:

On behalf of ChargePoint, Inc. I am submitting the enclosed Comments for filing with the Commission. Also enclosed is a Docket Cover Sheet. Please contact me if there are any questions or concerns regarding this filing.

Very truly yours,

Jeremy C. Hodges

JH1:jh
Enclosures

cc: Service List (via .pdf)

STATE OF SOUTH CAROLINA

BEFORE THE PUBLIC SERVICE COMMISSION

In re: Application of Duke Energy Carolinas, LLC For Approval of Proposed Electric Transportation Pilot and An Accounting Order to Defer Capital and Operating Expenses	)))))	Docket No. 2018-321-E
In re: Application of Duke Energy Progress, LLC For Approval of Proposed Electric Transportation Pilot and An Accounting Order to Defer Capital and Operating Expenses	))))	Docket No. 2018-322-E (Not Consolidated)

COMMENTS OF CHARGEPOINT, INC

I. INTRODUCTION

Consistent with the Report of the Office of Regulatory Staff ("ORS") of the Public Service Commission of South Carolina ("Commission"), submitted on April 1, 2019, in the above-captioned proceedings (the "ORS Report"), ChargePoint, Inc. ("ChargePoint") thanks the Commission for the opportunity to provide these comments regarding proposed transportation electrification pilots (the "ET Pilots") submitted by Duke Energy Progress ("DEP") and Duke Energy Carolinas ("DEC") (together, the "Companies"). As ChargePoint noted in comments filed December 10, 2018, in the above-captioned proceedings (the "ChargePoint Initial Comments"), the Companies' ET Pilots come before the Commission at a point of significant growth in the electric vehicle ("EV") market in South Carolina and nationally. ChargePoint is the leading electric vehicle charging network in the world, with more than 63,000 independently owned charging spots, including over 145 public stations in South Carolina, ChargePoint has thousands of customers – including workplaces, cities, retailers, apartments, hospitals, and fleets.

ChargePoint commends ORS for successfully coordinating a transparent and deliberate stakeholder process, which allowed interested parties across the spectrum of the electrification sector to offer perspectives on the Companies' proposals. As the ORS Report notes, there were

several recommendations offered during the stakeholder process as improvements to the ET Pilots. To that end, ChargePoint provided its perspective in written comments, participation in the stakeholder workshop on January 28, 2019, and a working group conference call on March 7, 2019.

II. SUMMARY OF COMMENTS

ChargePoint offers these comments to present two key areas of concern for the ET Pilots as modified[1], which ChargePoint believes would impact the competitive market for charging infrastructure in South Carolina: (1) the lack of clarity around a customer's ability to choose among EV charging network providers as part of the proposed rebate programs, and (2) the increased size and investment model proposed in the public DC fast charging ("DCFC") programs. To address these concerns, ChargePoint has two central recommendations for modification:

1. Enable eligibility of multiple EV charging networks in rebate programs to reinforce competitive markets and provide a wider range of customer choices; and,
2. Reject the expanded portion of the public DCFC program element to reflect the intent of the original scope of the program.

Importantly, these modifications do not substantially nor materially impact the fundamental aspects of the Companies' initial program application, nor change the consensus modifications, but rather leverage and provide support to the existing, active competitive market for EV charging in South Carolina.

III. SOME ET PILOT PROGRAM MODIFICATIONS OMIT KEY CONSIDERATIONS FOR COMPETITIVE MARKETS FOR CHARGING INFRASTRUCTURE

[1] With the exception of the proposed modifications discussed herein, ChargePoint supports all other proposed modifications to the ET Pilots.

The ChargePoint Initial Comments presented a range of best practices for utility EV charging programs for the Commission's consideration, including principles for any regulated utility investment in electric vehicle charging infrastructure. Those principles included:

a. *A core outcome to foster and support the existing competitive market for EV charging infrastructure.*

b. *Ongoing support for a diversity of competitive market offerings, allowing site hosts to continue to have a choice in charging solutions from multiple, qualified vendors of equipment and charging networks.*

c. *Site host control of charging infrastructure located on their properties, including pricing and access control, to align with their circumstances, preferences, and desired driver experience.*

d. *Stimulate private investment in charging infrastructure to ensure site hosts have "skin-in-the-game", lowering risks to ratepayer funds and making certain site hosts are invested in the success of deployments.*

e. *A requirement for all deployments to be smart, networked charging infrastructure, to maximize flexibility, control, and grid benefits.*

ChargePoint also provided a review of the proposed rebate programs, identifying those specific programs' alignment with ChargePoint's Guiding Principles that we believe support a growing, sustainable EV charging market. In the course of the stakeholder process, more details, clarifications, and modifications about each program emerged which suggest they may not align with ChargePoint's principles. As a result, ChargePoint believes that without further modification to address these issues, the ET Pilots will negatively impact the competitive market for EV charging and may not realize the full benefits and stated goals of the programs. Rather, they may hinder the ability for certain vendors to participate in the program, limit consumer choices, and slow private and non-utility investment in charging that is already underway.

As noted, ChargePoint focuses its concerns on two main program features: (1) the lack of clarity around a customer's ability to choose among EV charging network providers as part of the proposed rebate programs, and (2) the increased size and investment model proposed in the public

DCFC programs. Both concerns are centered around principle *b.* above, the diversity of competitive market offerings and a site host's choice among those offerings.

1. Lack of site host choice of EV charging network as part of rebate programs

As ChargePoint noted in its initial comments, the rebate-based ET Pilots have the potential to lower the barriers of deployment of electric transportation, reinforcing current market dynamics and accelerating competitive market activities. This dynamic is based around the concept that, under a rebate program, site hosts maintain the same choices of technology that they do under current, non-incentivized market conditions, and incentives defray the costs of those choices. ChargePoint found that the program description in the Companies' initial applications contained site host choice of hardware. However, the Companies' presentation at the January 28, 2019 stakeholder meeting made clear that customers would not be able to choose among EV charging network providers. This will limit the choice customers have in eligible equipment under these programs and prejudice the market in favor of a network of the utilities' choosing.

The EV charging market is defined by two separate segments that are inherently competitive: hardware vendors and network providers. Hardware vendors design and manufacture the physical charging station, which a third-party may install on a customer site. Network providers manage cloud services connecting the charging stations to both the charging station operator and the drivers who use the stations. In some cases, the hardware vendor and network provider may be the same company. For station operators, these network services include the actual communication functionality (typically cellular) as well as software features to remotely view station status, collect detailed charging session data, run analytical reports, conduct load control, set driver access controls and drivers, and much more. For EV drivers, the cloud services provide critical information on station locations, real-time availability, cost to use stations, wait listing or

reservations, authentication and payment for a charging session, updates on active charging sessions, among other services.

There are multiple hardware and network providers currently active in the market, each with their own business model, technology solutions, and feature sets. Under current market conditions, site hosts have a range of choices of charging technologies and charging network providers in an active competitive market. Site hosts make their choices of solutions based on a variety of factors and circumstances such as available network features and their alignment with the local use case, brand and reputation, customer service, cost, aesthetics, reliability, and more. Furthermore, it is the evolution and competition in network services that is primarily driving innovation in the EV charging market and delivering new value to end customers. New software features are continually released and pushed out over-the-air as they become available, making that market extremely dynamic, while the charging hardware itself remains a fixed once manufactured and deployed.

In successful utility programs, site hosts maintain the choice that they currently have among charging equipment and network providers, so that they may choose the solution that best fits their specific needs associated with their property and use case. Under the Companies' proposal, the utility would presumably choose a single network provider for program eligibility. Such a design would eliminate the customer voice in selecting among charging networks and limit choices of hardware to only those supported on the selected network. The strength of the rebate model is in its ability to accelerate current market activities, but that strength is only realized if program eligibility accommodates the multiple solutions available in that current market and maintains the role of the end customer to have a voice in that selection. Importantly, in

administering a rebate program with multiple network choices, the utility would still able to collect data and gain insights from stations deployed.[2]

2. Increased public DCFC program size expands beyond the scope of original pilot

During the stakeholder process, ChargePoint did not comment on the public DCFC program in the Companies' initial applications. The Companies now seek a modification to double the size of proposed DCFC program, from 30 stations to 60 stations across DEC and DEP territories, and propose to extend the same investment model of utility ownership and operation. While ChargePoint believes that this model of utility investment in charging infrastructure can disrupt current competitive market dynamics and is not aligned with best market practices, ChargePoint's primary concern is the expansion of the program beyond the original scope, which served as the basis for previous comment and feedback.

While many studies offer a wide range of expected market needs for DCFC in South Carolina in the coming decade[3], the market impacts of pursuing a pilot at this expanded scope must be taken into account. As part of a limited pilot effort, the utility should not be foundationally positioned to occupy a direct and substantial place in the market, as such expansive pilots may effectively predetermine market outcomes, capture prime locations for charging infrastructure, and slow the broader entrance of competitive market participants. Under the proposed modification to expand the program size, the Companies would double the market presence of a single selected vendor at an early stage in the competitive market's growth. In offering a single market solution,

[2] Notably, at the January 28, 2019 stakeholder meeting, Commission staff recommended that this issue be taken up in the State's Energy Plan within the South Carolina Energy Office. ChargePoint respectfully disagrees with this recommendation, as the lack of site host choice of network has direct bearing on the success of the ET Pilots.

[3] *See e.g.* National Renewable Energy Laboratory's *National Plug-In Electric Vehicle Infrastructure Analysis* (2017) (describing a need for 400 public DCFC projects by 2030) (available at https://www.nrel.gov/docs/fy17osti/69031.pdf).

installed on site hosts' properties at no cost, the Companies' expanded proposal would chill private investment for several years, rather than stimulate broader market participation.

IV. RECOMMENDED AMENDMENTS TO THE COMPANIES' MODIFIED PROPOSALS

ChargePoint recommends the Commission address these elements of the Companies' modified program, and thereby ensure that competitive markets for EV charging are fostered and supported. In summary ChargePoint respectfully advances the following amendments:

1. Enable eligibility of multiple EV charging networks in rebate programs to reinforce competitive markets and provide a wider range of customer choices; and,
2. Reject the expanded portion of the public DCFC program pilot to reflect the intent of the original scope of the program.

In addressing customer choice and expanding eligibility to multiple networks, the Commission would open the rebate program to broader industry participation. With greater industry participation, the program has the potential to accelerate deployments, as more network and hardware providers see the rebates as a tool to target and engage in the South Carolina market.

In rejecting the Companies' proposed expansion of the DCFC program, the Commission would bring the program in line with its initial application as a limited pilot program. In addition, the Commission would limit the potential market impact of a ratepayer funded deployment, mitigate risks to ratepayer funds, and create greater future flexibility for alternative investment models that leverage an open and competitive market. Should the Commission determine that the Companies investment in the expanded portion is warranted, ChargePoint believes that alternative investment models should be pursued for that expansion in order to pilot and learn from other utility program designs. Notably, the ChargePoint Initial Comments identified make-ready and

rebate models as alternative investment models that have been approved in other jurisdictions for DCFC deployments.

V. CONCLUSION

ChargePoint commends the efforts of ORS and the Commission in convening a successful stakeholder process to consider the ET Pilots. ChargePoint respectfully requests the Commission's consideration of the amendments recommended herein in order to achieve program goals and support a long-term sustainable market in electric vehicle charging infrastructure in South Carolina. ChargePoint looks forward to participating and contributing to future discussions with other interested parties and stakeholders on how to achieve beneficial transportation electrification.

Respectfully submitted this 23rd day of April, 2019.

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CERTIFICATE OF SERVICE

This is to certify that I, Jeremy C. Hodges, Esquire, have this date served *Comments of ChargePoint, Inc.* in the above referenced matter to the person(s) named below by causing said copy to be forwarded via email, and addressed as shown below:

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Dated: April 23, 2019.